REMARKS

Claims 1, 2 and 7-20 remain pending. Independent claims 1 and 15 have been amended to distinguish over the prior art of record. Accordingly, Applicants respectfully submit that the present application is in condition for allowance.

I. Claim Rejections - 35 USC §103(a)

In the FINAL Office Action dated May 13, 2009, claims 1, 2 and 7-20 are rejected under 35 USC §103(a) as being obvious over JP 2002-069623 A in view of JP 2001-026860 A.

In the FINAL Office Action, it is speculated that the manufacturing process of the present invention and the manufacturing process obtained by a combination of the cited references are similar, the alloy is similar, and therefore the structure of the alloy ultimately obtained is also similar.

In response, Applicants respectfully submit that the cited references fail to disclose sufficient detail relative to their manufacturing processes for one of ordinary skill in the art to be able to know whether or not they are similar to the process required to produce the present invention. However, Applicants respectfully submit that it is certain from the disclosures provided by the cited references that the alloy structures ultimately obtained are distinctly different relative to that required by the claims of the present application despite the chemical composition of the alloys being similar.

More specifically, the alloy structure required by independent claims 1 and 15 of the present application is configured from:

(a) island shaped rolled structures of a Co-rich phase derived from primary crystals that are formed during the casting process;

(b) island-shaped structures of a Co-rich phase derived from eutectic crystals that are formed during solidification; and

(c) island-shaped structures of a B-rich phase derived from eutectic crystals that are formed during solidification.

No new matter was added. For example, see page 4, lines 4-18, of the present application, as filed.

In addition, it should be noted that independent claims 1 and 15 have been amended to "consist of" the three above referenced of types of island-shaped structures. This amendment is made in accordance with the Examiner's suggestion on the second full paragraph of page 7 of the FINAL Office Action.

Turning to the cited references, JP '623 discloses a Co-Cr-Pt-B sputtering target having an alloy structure in which "cells" having a mean diameter of 200μm or less are segmented and divided by a continuous network of boride, and JP '860 discloses a Co-Pt-B target having an alloy structure in which an average grain size of a "matrix" is 50μm or less and in which the boride is dispersed in "layers" throughout the cross-section of the target.

Accordingly, when comparing the alloy structures of JP '623 and JP '860 to the limitations required by independent claims 1 and 15 of the present application, the "cells" of JP '623 and the "matrix" of JP '860 can be interpreted to correspond to the "Co-rich phase derived from primary crystals". Thus, assuming the "boride" disclosed in JP '623 and JP '860 corresponds to the "B-rich phase derived from eutectic crystals", JP '623 and JP '860 clearly lack the "Co-rich phase derived from eutectic crystals" required by claims 1 and 15 of the present application. Consequently, there are clear structural differences between the alloy structures of JP '623 and JP '860 and that required by claims 1 and 15 of the present application.

Further, the "consisting of" language of claims 1 and 15, as amended, eliminates the presence of a continuous network structure of boride or layers of boride within a matrix, thereby

further distinguishing the claims of the present application from the alloy structures disclosed by the cited references.

Applicants respectfully submit that the cause of the above referenced differences in alloy structures are believed to be the use of different manufacturing conditions (i.e., one must logically conclude that the processes are different for these results to be obtained). The basic manufacturing steps include processes of dissolution, casting and rolling. Here, Applicants believe that the specific rolling conditions are considered the likely cause in the difference of alloy structures.

More specifically, with respect to JP '623 and JP '860, it is submitted that the cast structure of "Co-rich phase derived from eutectic crystals" is lost because the heat history during rolling is long. The alloy structure changes if the heat history is unduly added as described above. Thus, the present invention differs from the combination of JP' 623 and JP '860 in that the present invention requires heat rolling to be performed with an optimal heat history at a bare minimum. This aspect is considered at least one of the causes of the difference in structures between the present invention and JP '623 and JP '860.

With respect to metal materials, their alloy structures and characteristics are determined by both the chemical composition and the processing conditions (including heat treatment). Consequently, the composition and characteristics of two metal materials can be determined to be identical only when both their chemical composition and specific processing conditions are the same. The present invention and the cited references have a similar chemical composition of a Co-Cr-Pt-B alloy. However, JP '623 and JP '860 fail to provide sufficient detailed and specific information concerning casting and plastic working conditions performed on the alloys and further fail to describe any surface finishing conditions. Thus, Applicants respectfully submit that there are no reasonable grounds for verifying specific processing conditions of JP '623 and

JP '860, much less for concluding that they are the same as that required for the present invention. However, unlike the processing conditions, it is clear from the disclosures of the cited references that the disclosed alloy structures are distinctly different to that of the present invention, despite the use of similar chemical compositions.

In addition, Applicants respectfully submit that the Examiner has erred in the interpretation that JP '860 discloses heat rolling of 10% or less. JP '860 refers to 10% or less with respect to the draft of a single roll process. The actual rolling ratio for JP '860 is 80% (100x(40-8)/40=80%) since the disclosed thickness of the ingot is reduced from 40mm to 8mm. This ratio clearly far exceeds that required by the present invention. If the heat rolling ratio exceeds 40% as described in the present application, as filed, the Co-rich phase derived from primary crystals and the Co-rich phase derived from eutectic crystals will bond and coarsen. For example, see page 4, lines 25-30, of the present application, as filed. This fact is also believed relevant to the phase differences in the alloy structures.

Accordingly, since there are clear differences in alloy structure between that disclosed by the cited references and that required by claims 1 and 15 of the present application (which also mandates that there are clear differences in processing conditions), Applicants respectfully submit that the claimed invention of the present application would not have been obvious to one of ordinary skill in the art at the time of the invention. Accordingly, Applicants respectfully submit that claims 1, 2 and 7-20 of the present application are patentable over JP '623 in view of JP '860.

II. Conclusion

In view of the above amendments and remarks, Applicants respectfully submit that the claim rejections have been overcome and that the present application is in condition for allowance. Thus, a favorable action on the merits is therefore requested.

Please charge any deficiency or credit any overpayment for entering this Amendment to our deposit account no. 08-3040.

Respectfully submitted,
Howson & Howson LLP
Attorneys for Applicants

By /William Bak/
William Bak
Reg. No. 37,277
501 Office Center Drive
Suite 210
Fort Washington, PA 19034
(215) 540-9216